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TO THE EDITOR: I was pleased to read Olsen and colleagues' article regarding the need for do-not-resuscitate (DNR) orders in the home so that paramedics are not forced, because of legal mandates, to disregard a patient's autonomy.<sup>1</sup> Recently we admitted a 52-year-old woman with advanced metastatic breast carcinoma to our intensive care unit, intubated her, and initiated pressor agents despite her well-known and documented desire not to be resuscitated.

This patient, a member of the Hemlock Society, also had a durable medical power of attorney and had left a handwritten note saying that she wanted to die. She was found by paramedics in her home with agonal respirations. After a frenzied series of phone conversations, including some with the city attorney's office and local police departments, the paramedics were advised that they were duty-bound to try to save her life. Had they not done so, they were told, they would have been subject to prosecution for abetting a suicide.

While intubated and unconscious, she developed a tension pneumothorax and had to have a chest tube thoracotomy done. After a painful and prolonged intubation and stays at two different hospitals, she finally went home, where she died about eight weeks after this unfortunate and somewhat callous saga had begun.

Under a new state law persons in Colorado now can reject cardiopulmonary resuscitation by signing a form received from their physician. The law was intended for terminally ill patients who prefer to die at home instead of being rushed off to a hospital. Another facet of this dignified measure is to protect emergency personnel when they are faced with patients who clearly do not want treatment to prolong their agony. The State of Colorado has heeded the exhortation of these authors to establish a viable system for home DNR orders in their communities. Patient care will be truly enhanced through the widespread acceptance of this system.

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#### REFERENCE

1. Olsen EB, Lowenstein SR, Koziol-McLain J, Summers JG: Do-not-resuscitate order—What happens after hospital discharge? *West J Med* 1993; 158:484-487

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#### Dr Lowenstein Responds

TO THE EDITOR: We appreciate the opportunity to respond to these letters. It is encouraging to learn from Dr Mehler and Dr Harding that other states, counties, and municipalities are working to develop prehospital do-not-resuscitate (DNR) policies. Harding has outlined in detail several important barriers to implementing prehospital DNR policies—proof of patient identification, the need for patients to wear wristbands or bracelets, the ambivalence of family members who call 911, the needs that patients and family members sometimes have to change their minds, and conflicting policies and protocols that

arise when different paramedic units cross county and city lines.

As Mehler mentions, since we conducted our study in Colorado, the Colorado legislature has passed legislation and the Colorado Medical Society has developed a detailed protocol to implement home DNR orders. The program is new. It is already evident, however, that implementation will face some obstacles. Physicians throughout the state must be sent educational material describing the legislation, the rationale for the program, and the means to secure at-home DNR orders for their patients. Fundamental changes in paramedic protocols must take place. Efforts must be made to coordinate home DNR orders with existing emergency department and inpatient do-not-resuscitate protocols. Citizens throughout the state must be made aware that they can request home DNR orders, that they must sign special documents, and that they can also purchase wrist bracelets that say "do not resuscitate" and that contain their name and identifying information. In addition, given the cost of the DNR bracelets—currently \$27—a means must be found to assist indigent patients to purchase them. Finally, as with any new health care policy, it is essential to collect data to analyze the effect on patient care and comfort.

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#### The Potential Effects of Enterprise Liability

TO THE EDITOR: The term enterprise liability, unknown to most physicians until the past few months, is seen with increasing frequency in the medical and public press. The concept is not new—airline pilots and employed physicians have long been protected from liability for their errors and omissions by primary accountability of an airline or health plan.

What is new, and particularly important to physicians in private practice, is the application of "enterprise liability" to hospitals.

Hospital liability, though not yet required by any state legislature, is recommended and best described in Paul Weiler's book, *Medical Malpractice on Trial*,<sup>1</sup> as one of four proposals to counter the "malpractice problem." If this proposal is implemented, hospitals will be liable for negligence by medical staff members; physicians will not be legally responsible for negligent actions. The supposed deterrence factor of malpractice law will be shifted from the physician to the hospital, giving a hospital moral and economic clout to evaluate, assess, and discipline physicians to a degree far beyond current medical staff oversight.

Much that is now written of enterprise liability relates to its application to managed care entities, such as health maintenance organizations, where, in many instances,

physicians' responsibility and obligations are still being negotiated.

Physicians are correct in being apprehensive that what would seem a welcome relief from malpractice insurance costs may instead be trouble. If legislative or regulatory pressure produces hospital liability for medical staff decisions, only a fundamental change in the relationship between hospital and physician staff will permit the continuing influence of physician judgment to be a dominant factor in the appraisal and assurance of quality of care and in the evaluation, counseling, and credentialing of the medical staff.

Concerned physicians might well begin to explore the organizational possibilities that differ from the conventional governing board-administrator-medical staff arrangement. Loosely affiliated staff status may no longer be tenable when changes in law interpose a hospital accountability between physician and patient. Certainly the resources of medical societies should be used to call on legal and organizational experts to consider changes in the hospital "culture" that will best maintain the role of physicians in quality-of-care decisions and in the oversight of quality of care if hospital liability comes to pass.

What organizational changes will best meld physicians' interests with those of the hospital, so that physicians' professional autonomy can continue, and physicians, not administrators, more effectively monitor the work of medical staff? Can a new medical staff relationship promote physician loyalty and concern for hospital well-being while ensuring physician participation in the collective actions and voice of the hospital?

The introduction of "hospital culture" into the discussion is neither irreverent nor irrelevant. Proponents of corporate medicine note the "social insularity of the physician group," that "the physician profession-based culture may 'clash' with corporate culture," that "the conduct of physicians must be modified," that hospitals, among others, "are presently attempting to alter physician practice patterns," and that "managers can then establish organizational environments that effectively reduce the tension between cultures of the physician and the organization."<sup>2</sup>

I urge physicians to be adequately prepared to have an equal share in developing and guiding these new organizational environments. Now, while hospital liability is being discussed, and before it is implemented, is the time for physicians to consult with organizational and legal specialists who may best design a system that fosters the best provision of care, staff autonomy, oversight of colleagues' work, and accountability to patients and the community.

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#### REFERENCES

1. Weiler PC: Medical Malpractice on Trial. Cambridge, Mass, Harvard University Press, 1991
2. Meyer PG, Tucker SL: Incorporating an Understanding of Independent Physician Culture Into Hospital Structure and Operations. *Hosp Health Services Administr* 1992; 37:465-476

## Cocaine Toxicity in Glycogen Storage Disease

TO THE EDITOR: Cocaine has been implicated as a skeletal muscle toxin, producing nontraumatic rhabdomyolysis<sup>1-3</sup> or exacerbation of muscle weakness.<sup>4</sup> We report a case of a patient with previously diagnosed but asymptomatic glycogenosis who had prolonged respiratory muscle insufficiency after inhaling crack cocaine. This is the first report of such a case.

### Report of a Case

The patient, a 26-year-old woman, was diagnosed at age 3 with glycogenosis type IIIA by muscle and liver biopsy in which the specimen showed an absence of glycogen debranching enzyme in both tissues. Before the current admission to hospital, she had had no clinical signs of muscle weakness, but had mildly elevated creatine kinase levels. She was admitted to the University Medical Center, Las Vegas, Nevada, in respiratory distress after several days of smoking crack cocaine. She was 16 weeks' pregnant. Her clinical condition worsened, necessitating intubation and mechanical ventilation. At this time she had shoulder girdle weakness, being unable to abduct her arms against minimal pressure. The chest radiograph showed bilateral, diffuse alveolar infiltration. Echocardiography revealed good contractile function. Her pulmonary capillary wedge pressure was normal. The patient's serum chemistry values were notable for a potassium level of 3.3 mmol per liter (normal, 3.5 to 5.5), aspartate aminotransferase 116 units per liter (normal, 5 to 35), creatine kinase 2,000 units per liter (normal, 35 to 230) without elevated levels of the myocardial-specific isoenzyme, triglycerides 3.10 mmol per liter (275 mg per dl [normal, 0.34 to 1.70]), and cholesterol 6.10 mmol per liter (236 mg per dl [normal, 3.65 to 5.20]). Serum levels of calcium, phosphorus, and magnesium were within normal limits. The urine myoglobin test was negative.

The patient's cocaine-induced pulmonary edema abated notably within two days of intubation, but she could not be weaned from mechanical ventilation. Attempts at weaning showed that she was unable to generate a static inspiratory pressure of 20 cm of water and maintained a respiratory rate of 30 to 40 breaths per minute to avoid hypercarbia. She remained on mechanical ventilation for 11 days before finally being able to breathe effectively on her own. Her creatine kinase serum level decreased to 1,150 units per liter before weaning from mechanical ventilation was possible.

The patient had a normal neonate by cesarean section after a pregnancy of nine months and was later lost to follow-up.

### Discussion

Cocaine use unmasked the subclinical skeletal muscle weakness in our patient. Glycogenosis type III (Cori's disease) is an autosomal recessive glycogen storage disease caused by an inherited deficiency of glycogen debranching enzyme, with a resultant accumulation of